

# PROJECT 10073 RECORD CARD

1. DATE 15 March 1963		2. LOCATION 36.32N 174.02W (Pacific)		12. CONCLUSIONS <input type="checkbox"/> Was Balloon <input type="checkbox"/> Probably Balloon <input type="checkbox"/> Possibly Balloon <input type="checkbox"/> Was Aircraft <input type="checkbox"/> Probably Aircraft <input type="checkbox"/> Possibly Aircraft <input type="checkbox"/> Was Astronomical <input type="checkbox"/> Probably Astronomical <input type="checkbox"/> Possibly Astronomical <input checked="" type="checkbox"/> Other <u>Satellite</u> <input type="checkbox"/> Insufficient Data for Evaluation <input type="checkbox"/> Unknown	
3. DATE-TIME GROUP Local _____ GMT 16/0730Z		4. TYPE OF OBSERVATION <input type="checkbox"/> Ground-Visual <input type="checkbox"/> Ground-Radar <input checked="" type="checkbox"/> Air-Visual <input type="checkbox"/> Air-Intercept Radar			
5. PHOTOS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6. SOURCE Military			
7. LENGTH OF OBSERVATION not reported		8. NUMBER OF OBJECTS one		9. COURSE Northerly	
10. BRIEF SUMMARY OF SIGHTING Space object, small and circular, resembling bright star tracked through 30 dgr arc fm 150 dgr to 120 dgr at 30 dgr elevation. Altitude & speed unknown, but speed estimated very fast.				11. COMMENTS Possible satellite sighting. AT 0627Z AT 161.72W Heavenly	

DEPARTMENT OF THE AIR FORCE  
STAFF MESSAGE BRANCH  
UNCLASSIFIED MESSAGE

I N C O M I N G

AF IN : 52416 (16 Mar 63) L/sc

page 1 of 2

INFO : NIN-9, XOP-1, XOPX-4, SAFOS-3, ARMY-2, CMC-8, JCS-35,  
OSD-15, CIA-11, NSA-7, DIA-20, DIA-CIIC-2 (120)

SMB 3244

ZCZCHQA659ZCUJA259

\*\*\*\*\* YY RUEAHQ

DE RUHPHC 038

ZNR

Y 260929Z

FM COMHAWSEAFRON

TO RUHLKW/COMD HAWAIRDEFDIV WHEELER AFB

INFO RUHPB/CONCPACFLT

RUWGALB/CINCNORAD ENT AFB, COLO

RUEAHQ/COFSHSAF WASHDC

RUECW/SECNAV

RUECW/CNO

RUHAFS/CINCHSARPAC

RUHPA/CINCPAC

RUHLKM/PACAF

RUHLKSA/PACAF BASECOM, HICKAM AFB

RUKACR/COMALSEAFRON

NAVY



DEPARTMENT OF THE AIR FORCE  
STAFF MESSAGE BRANCH  
UNCLASSIFIED MESSAGE

AF IN : 52416 (16 Mar 63) INCOMING  
O 160907Z

page 2 of 2

FM COMBARPAC

TO COMNAWSEAFRON

BT

UNCLAS

1. CIRVIS REPORT
2. BARRIER AIRCRAFT N43217
3. SPACE BORN OBJECT, SMALL AND CIRCULAR,  
RESEMBLING BRIGHT STAR TRACKED THRU 30 DEGREES OF  
ARC FROM 150 DEGREES THRU 120 DEGREES TRUE
4. REPORTING AIRCRAFT POSIT 36-32N, 174-02W
5. 160730Z
6. UNKNOWN 30 DEGREES ABOVE HORIZON
7. LONE
8. UNKNOWN BUT VERY FAST
9. REPORTING A/C AT FL100 HEADING 195 TRUE
10. THIS MSG CONFIRMS INFO PRESENTED BY PHONECON  
AT 160820Z.

BT

16/0908Z

NOTE: ADV CY TO NIN, CIIC AND XOPX.



EQUATOR S-N		SATELLITE 1960 TOTA 1 FOR OTHER LATITUDES									
TIME (UT)	LONG. (W)	LAT.	TIME CORR.	SOUTH-NORTH		NORTH-SOUTH		TIME	LONG.	HT.	BEAR.
				CORR.	(MI)	(N-E)		CORR.		(MI)	(N-E)
MARCH 10, 1963											
1 24.3	63.72	67.4	29.0	-82.64	896	90.0*	29.0	-82.68	896	90.0*	
1 19.8	92.92	45.0	23.9	-60.77	910	72.4	34.1	-104.55	894	107.6*	
5 15.2	122.12	40.0	19.7	-55.47	921	60.8	38.3	-119.85	876	119.2*	
7 10.6	151.12	35.0	16.6	-45.87	923	54.0	41.3	-129.49	871	126.0*	
9 5.1	180.52	30.0	13.9	-35.54	936	49.4	43.9	-136.84	869	130.6*	
11 1.5	209.72	25.0	9.0	-25.76	958	43.7	48.7	-146.15	855	136.3*	
12 50.9	238.92	0.	0.	0.	965	39.9	57.3	-165.50	872	140.1*	
13 52.4	268.12	-20.0	-9.1	17.25	975	43.7*	-49.5	147.25	892	136.3	
15 47.0	297.32	-30.0	-14.0	28.51	976	49.4*	-44.7	136.64	907	130.6	
17 41.2	326.52	-35.0	-16.8	35.07	973	54.0*	-42.0	129.31	916	126.0	
19 36.7	355.72	-40.0	-19.9	45.43	972	60.7*	-38.9	119.67	926	119.2	
21 34.1	384.92	-45.0	-24.2	60.69	966	72.4*	-34.7	104.41	940	107.6	
		-47.4	-29.4	82.53	955	90.0*	-29.5	82.57	955	90.0*	

MARCH 11, 1963											
2 24.5	64.12	67.4	29.0	-82.64	901	90.0*	29.0	-82.68	901	90.0*	
2 20.0	93.32	45.0	23.9	-60.77	914	72.4	34.2	-104.54	897	107.6*	
4 15.4	122.52	40.0	19.7	-55.47	924	60.8	38.3	-119.84	881	119.2*	
6 10.9	151.71	35.0	16.6	-45.86	932	54.0	41.3	-129.44	876	126.0*	
8 5.3	180.91	30.0	13.9	-35.54	938	49.4	44.0	-136.82	872	130.6*	
10 1.7	210.11	25.0	9.0	-25.76	948	43.7	48.7	-146.13	859	136.3*	
12 51.7	239.31	0.	0.	0.	954	39.9	57.4	-165.48	874	140.1*	
13 53.2	268.51	-20.0	-9.1	17.25	972	43.7*	-49.4	147.25	892	136.3	
15 47.7	297.71	-30.0	-14.0	28.51	972	49.4*	-44.6	136.66	905	130.6	
17 42.1	326.91	-35.0	-16.8	35.07	971	54.0*	-41.9	129.33	914	126.0	
19 37.6	356.11	-40.0	-19.9	45.44	968	60.7*	-38.8	119.70	923	119.2	
21 35.0	385.31	-45.0	-24.1	60.70	961	72.4*	-34.7	104.47	936	107.6	
23 34.8	414.51	-47.4	-29.4	82.54	950	90.0*	-29.4	82.58	950	90.0*	

MARCH 12, 1963											
1 30.2	74.74	67.4	29.0	-82.63	905	90.0	29.1	-82.67	905	90.0	
1 25.7	103.94	45.0	23.9	-60.77	918	72.4	34.2	-104.54	894	107.6*	
5 21.1	133.14	40.0	19.7	-55.47	927	60.8	38.3	-119.83	885	119.2*	
7 16.5	162.34	35.0	16.6	-45.86	934	54.0	41.4	-129.47	880	126.0*	
9 12.0	191.54	30.0	13.9	-35.54	940	49.4	44.0	-136.81	877	130.6*	
11 7.4	220.74	25.0	9.0	-25.76	949	43.7	48.8	-146.12	873	136.3*	
13 51.9	249.94	0.	0.	0.	952	39.9*	57.5	-165.47	876	140.1*	
14 53.4	279.14	-20.0	-9.1	17.26	960	43.7*	-49.3	147.27	891	136.3	
16 47.9	308.34	-30.0	-14.0	28.52	967	49.4*	-44.6	136.68	904	130.6	
18 42.3	337.54	-35.0	-16.7	35.03	965	54.0*	-41.9	129.34	911	126.0	
20 37.8	366.74	-40.0	-19.9	45.45	963	60.7*	-38.8	119.72	920	119.2	
22 35.0	395.94	-45.0	-24.1	60.71	957	72.4*	-34.6	104.44	932	107.6	
		-47.4	-29.4	82.55	946	90.0	-29.4	82.59	946	90.0	

MARCH 13, 1963											
0 35.5	64.12	67.4	29.1	-82.63	909	90.0	29.1	-82.67	909	90.0	
2 30.9	93.32	45.0	23.9	-60.77	921	72.4	34.2	-104.53	898	107.6*	
4 26.4	122.52	40.0	19.7	-55.47	929	60.8	38.3	-119.83	890	119.2*	
6 21.8	151.72	35.0	16.6	-45.86	936	54.0	41.4	-129.46	885	126.0*	
8 17.2	180.92	30.0	13.9	-35.54	941	49.4	44.1	-136.80	881	130.6*	
10 12.7	210.12	25.0	9.0	-25.77	949	43.7	48.8	-146.11	877	136.3*	
12 8.1	239.32	0.	0.	0.	959	39.9*	57.5	-165.45	879	140.1*	
14 3.6	268.52	-20.0	-9.0	17.26	964	43.7*	-49.3	147.29	892	136.3	
16 50.0	297.72	-30.0	-14.0	28.52	963	49.4*	-44.5	136.69	901	130.6	
18 44.5	326.92	-35.0	-16.7	35.04	961	54.0*	-41.8	129.36	910	126.0	
20 39.0	356.12	-40.0	-19.8	45.46	958	60.7*	-38.7	119.73	918	119.2	
22 34.5	385.32	-45.0	-24.1	60.72	952	72.4*	-34.5	104.45	929	107.6	
24 34.8	414.52	-47.4	-29.4	82.56	947	90.0	-29.3	82.61	947	90.0	

EQUATOR S-N		SATELLITE 1960 TOTA 1 FOR OTHER LATITUDES									
TIME (UT)	LONG. (W)	LAT.	TIME CORR.	SOUTH-NORTH		NORTH-SOUTH		TIME	LONG.	HT.	BEAR.
				CORR.	(MI)	(N-E)		CORR.		(MI)	(N-E)
MARCH 14, 1963											
1 36.2	63.72	67.4	29.1	-82.63	913	90.0	29.1	-82.67	913	90.0	
1 31.6	92.92	45.0	23.9	-60.77	924	72.4	34.2	-104.53	902	107.6*	
5 27.1	122.12	40.0	19.7	-55.49	931	60.7	38.4	-119.82	895	119.2*	
7 22.5	151.32	35.0	16.6	-45.87	937	54.0	41.4	-129.45	889	126.0*	
9 17.9	180.52	30.0	13.9	-35.54	941	49.4	44.1	-136.79	886	130.6*	
11 13.4	209.72	25.0	9.0	-25.77	948	43.7	48.9	-146.09	881	136.3*	
13 8.8	238.92	0.	0.	0.	957	39.9*	57.6	-165.44	881	140.1*	
15 4.3	268.12	-20.0	-9.0	17.26	960	43.7*	-49.2	146.00	892	136.3	
17 59.7	297.32	-30.0	-13.9	28.53	959	49.4*	-44.4	136.71	903	130.6	
19 55.1	326.52	-35.0	-16.7	35.85	957	54.0*	-41.0	129.37	909	126.0	
21 50.6	355.72	-40.0	-19.8	45.46	954	60.7*	-38.7	119.75	916	119.2	
22 46.0	384.92	-45.0	-24.0	60.73	948	72.4*	-34.5	104.47	927	107.6	
		-47.4	-29.3	82.58	938	90.0	-29.3	82.62	938	90.0	

MARCH 15, 1963											
0 41.5	74.13	67.4	29.1	-82.62	916	90.0	29.1	-82.67	916	90.0	
2 36.9	103.33	45.0	23.9	-60.77	926	72.4	34.3	-104.52	906	107.6*	
4 32.3	132.53	40.0	19.7	-55.49	933	60.7	38.4	-119.82	899	119.2*	
6 27.8	161.73	35.0	16.6	-45.87	938	54.0	41.5	-129.45	894	126.0*	
8 23.2	190.93	30.0	13.9	-35.54	941	49.4	44.1	-136.79	890	130.6*	
10 18.7	220.13	25.0	9.0	-25.77	947	43.7	48.9	-146.09	885	136.3*	
12 14.1	249.33	0.	0.	0.	954	39.9*	57.6	-165.47	894	140.1*	
14 9.5	278.53	-20.0	-9.0	17.26	956	43.7*	-49.2	146.02	893	136.3	
16 5.0	307.73	-30.0	-13.9	28.53	954	49.4*	-44.4	136.72	903	130.6	
18 0.4	336.93	-35.0	-16.6	35.85	953	54.0*	-41.7	129.39	908	126.0	
19 55.9	366.13	-40.0	-19.8	45.47	950	60.7*	-38.6	119.76	915	119.2	
21 51.3	395.33	-45.0	-24.0	60.74	944	72.4*	-34.4	104.48	925	107.6	
23 46.7	424.53	-47.4	-29.2	82.59	935	90.0	-29.2	82.63	935	90.0	

MARCH 16, 1963											
1 42.2	83.74	67.4	29.1	-82.63	919	90.0	29.1	-82.67	919	90.0	
3 37.6	112.94	45.0	23.9	-60.77	928	72.4	34.3	-104.52	910	107.6*	
5 33.1	142.14	40.0	19.7	-55.49	934	60.7	38.4	-119.81	903	119.2*	
7 28.5	171.34	35.0	16.6	-45.87	938	54.0	41.5	-129.44	898	126.0*	
9 23.9	200.54	30.0	13.9	-35.55	941	49.4	44.1	-136.78	894	130.6*	
11 19.4	229.74	25.0	9.0	-25.77	946	43.7	48.9	-146.08	889	136.3*	
13 14.8	258.94	0.	0.	0.	951	39.9*	57.7	-165.41	887	140.1*	
15 10.3	288.14	-20.0	-9.0	17.27	952	43.7*	-49.1	146.03	895	136.3	
17 5.7	317.34	-30.0	-13.9	28.54	950	49.4*	-44.3	136.74	903	130.6	
19 1.2	346.54	-35.0	-16.6	35.86	948	54.0*	-41.6	129.40	908	126.0	
21 56.6	375.74	-40.0	-19.7	45.48	946	60.7*	-38.6	119.77	914	119.2	
23 52.0	404.94	-45.0	-24.0	60.75	941	72.4*	-34.4	104.49	923	107.6	
		-47.4	-29.2	82.60	932	90.0	-29.2	82.64	932	90.0	

# MODIFIED ORBITAL ELEMENTS FOR EARTH SATELLITE 1960 TOTA 1

REFERENCE TIME 1963 Y 3 M 20 1 H 32.19 M UT  
 INCLINATION 41.22 DEG.  
 ASCENDING NODE 150.13 DEG. WEST  
 PERIOD 119.2 MIN.  
 ARGUMENT OF PERIGEE 129.10 DEG.  
 RATE OF CHANGE 0.00001 DEG. PER PERIOD  
 ANOMALY PERIOD 119.2 MIN.  
 RATE OF CHANGE 0.00005 MIN. PER PERIOD  
 ECCENTRICITY 0.0177  
 RADIUS OF ORBIT 40